AMENDMENTS TO THE CLAIMS

1. (Currently Amended) A method of interacting with a client process on a mobile device, connected to a network, ~~over a wireless link~~ to navigate an application, the method comprising the steps of:

managing information at a ~~mobile application~~ server executing on a platform connected to the network, the information ~~including~~ containing first data describing a graphical element for display on the mobile device, wherein the graphical element includes at least one or more of an input text field, a button, a check list, a set of radio buttons, a pull down menu, a popup menu and the combinations thereof for prompting to obtain input from a user of the mobile device;

wherein the first data include~~ings~~:

a first reference to the graphical element, and

values for a plurality of attributes of the graphical element, wherein one of the values associated with one of the plurality of attributes is a second reference to a page associated with requesting a service from a first application;

sending to the client process second data based on the first data to render ~~for rendering~~ the graphical element on the mobile device, ~~second data based on the first data,~~ wherein the second data include~~ings~~ the first reference to the graphical element;

in response to the user of the mobile device interacting with the graphical element,

receiving at the server third data indicating the first reference to the graphical element ~~in response to a user of the mobile device selecting the graphical element~~; and

in response to receiving the third data, performing the steps of:

reading the first reference from the third data ~~the first reference~~;

using the first reference to the graphical element that is read from the third data to locate the first data that describes the graphical element;

after locating the first data that describes the graphical element, reading the second reference from the first data ~~the second reference~~; and

requesting the page from the first application based on the second reference.

2. (Original) The method of Claim 1, wherein the second data does not include the second reference to the page.

3. (Original) The method of Claim 1, wherein the step of managing further comprises storing the first data in a data structure.

4. (Original) The method of Claim 3, wherein the second reference is a value of a next page attribute of the data structure.

5. (Original) The method of Claim 3, wherein the data structure inherits methods and attributes from a bean class for exhibiting persistence and serialization.

6. (Original) The method of Claim 5, wherein the bean class is a JavaBeans class.

7. (Original) The method of Claim 1, further comprising the step of receiving fourth data from a second application, the fourth data describing the graphical element and including the second reference to the page associated with requesting the service from the first application.

8. (Original) The method of Claim 7, wherein the second application is different than the first application.

9. (Original) The method of Claim 7, wherein the second application is the same as the first application.

10. (Original) The method of Claim 7, said step of managing the information further comprising generating the first reference based on the fourth data.

11. (Original) The method of Claim 1, further comprising the step of receiving fourth data from the first application in response to said step of requesting the page, the fourth data describing the page and comprising fifth data describing a different graphical element for display on the mobile device, the fifth data including a third reference to a different page associated with requesting a service from a second application.

12. (Currently Amended) The method of Claim 11, wherein the information managed by the ~~mobile applications~~ server includes the fifth data.

13. (Original) The method of Claim 1, wherein the information managed includes fourth data about a plurality of pages associated with a plurality of applications and the step of managing the information further comprises generating a unique name for the page among the plurality of pages based on the second reference.

14. (Currently Amended) The method of Claim 1, said step of requesting the page further comprising providing fourth data to the application based the information managed by the ~~mobile applications~~ server.

15. (Original) The method of Claim 14, wherein the fourth data includes the second reference.

16. (Original) The method of Claim 14, wherein the third data does not include the fourth data.

17. (Original) The method of Claim 14, wherein the second data does not include the fourth data.

18. (Original) The method of Claim 14, wherein the fourth data comprises a universal resource locator (URL) address for the page for use with an Internet protocol (IP) on the network.

19. (Original) The method of Claim 18, wherein the fourth data further comprises input parameters and corresponding values for use by the application at the URL address in providing the service associated with the page.

20. (Original) The method of Claim 1, wherein:
the graphical element is included on a different page associated with requesting a different service from a second application;
the different page has a third reference; and
the method further comprises requesting the different service from the second application in response to receiving the third data based on the third reference.

21. (Original) The method of Claim 20, wherein the second application is different than the first application.

22. (Original) The method of Claim 20, wherein the second application is the same as the first application.

23. (Currently Amended) The method of Claim 20, wherein:
the information managed by the ~~mobile applications~~ server includes fourth data describing the different page including the third reference to the different page;
the step of requesting the different service from the second application further comprising sending fifth data to the second application based on at least one of the first data and the fourth data.

24. (Original) The method of Claim 20, wherein the step of requesting the different service from the second application comprises invoking a particular method of the second application.

25. (Original) The method of Claim 24, wherein:
the particular method is an event handling method for an exiting page event associated with the different page;
the step of invoking the particular method further comprises generating an exiting page event for the different page; and
the exiting page event includes the third reference.

26. (Original) The method of Claim 25, wherein:
the page is data structure that inherits methods and attributes from a mobile bean class defining an event handling interface for an exiting page event; and
the particular method is an implementation of the event handling interface; and
the page includes the particular method.

27. (Original) The method of Claim 26, wherein the mobile bean class inherits methods and attributes from a JavaBeans class.

28. (Original) The method of Claim 20, wherein the second data does not include the third reference.

29. (Original) The method of Claim 20, wherein the third data does not include the third reference.

30. (Original) The method of Claim 20, said step of requesting the different service further comprising providing fourth data to the application.

31. (Original) The method of Claim 30, wherein the fourth data comprises a universal resource locator (URL) address for the page for use with an Internet protocol (IP) on the network.

32. (Original) The method of Claim 31, wherein the fourth data further comprises input parameters and corresponding values for use by the application at the URL address in providing the service associated with the page.

33. (Original) The method of Claim 31, wherein the second data does not include the URL address.

34. (Original) The method of Claim 31, wherein the third data does not include the URL address.

35. (Currently Amended) A method of interacting with a client process on a mobile device, connected to a network, ~~over a wireless link~~ to navigate an application, the method comprising the steps of:

managing information at a ~~mobile application~~ server executing on a platform connected to the network, the information including:

first data describing a plurality of pages sent for display on the mobile device, each page associated with requesting a service from an application, wherein each page has one or more graphical elements, wherein each graphical element includes at least one or more of an input text field, a button, a check list, a set of radio buttons, a pull down menu, a popup menu and the combinations thereof for prompting to obtain input from a user of the mobile device; ~~and~~

wherein the first data includes:

a first reference to each graphical element of the one or more graphical elements, and

values for a plurality of attributes of each graphical element, wherein one of the values associated with one of the plurality of attributes is a second reference to one page of the plurality of pages[[,]]; and

second data describing associations between special keys on the mobile device and page changes among the plurality of pages;

receiving third data from the client process indicating a user of the mobile device has pressed a particular key of the special keys; and

in response to receiving the third data, performing the steps of:

determining a particular page change of the page changes associated with the particular key,

requesting the particular page change from the application,

determining a particular page of the plurality of pages based on the first data and the particular page change, wherein the step of determining the particular page further comprises:

using the particular page change of the page changes to locate the first data that describes the plurality of pages,

after locating the first data, reading from the first data the particular second reference to the particular page, and

sending, to the client process for rendering a particular graphical element of the particular page, fourth data based on the first data, the fourth data including a particular first reference to the particular graphical element.

36. (Original) The method of Claim 35, wherein the page changes include a page back change and a page forward change.

37. (Original) The method of Claim 35, wherein the page changes include a return to a menu page.

38. (Previously Presented) The method of Claim 35, said step of requesting the particular page change from the application comprising the step of requesting the particular page from the application.

39. (Previously Presented) The method of Claim 38, said step of requesting the particular page from the application comprising the steps of:

generating fifth data indicating the particular page; and

invoking a first method of the application with the fifth data as an input parameter.

40. (Previously Presented) The method of Claim 39, wherein:

the fifth data describes an event; and

the first method of the application is an event handling method.

41. (Currently Amended) A computer-readable medium carrying instructions for interacting with a client process on a mobile device, connected to a network, ~~over a wireless link~~ to navigate an application, the computer-readable medium comprising instructions for causing one or more processors to perform the steps of:

managing information at a ~~mobile application~~ server executing on a platform connected to the network, the information ~~including~~ containing first data describing a graphical element for display on the mobile device, wherein the graphical element includes at least one or more of an input text field, a button, a check list, a set of radio buttons, a pull down menu, a popup menu and the combinations thereof for prompting to obtain input from a user of the mobile device;

wherein the first data include~~ings~~:

a first reference to the graphical element, and

values for a plurality of attributes of the graphical element, wherein one of the values associated with one of the plurality of attributes is a second reference to a page associated with requesting a service from a first application;

sending to the client process second data based on the first data to render ~~for rendering~~ the graphical element on the mobile device, ~~second data based on the first data,~~ wherein the second data include~~ings~~ the first reference to the graphical element;

in response to the user of the mobile device interacting with the graphical element, receiving at the server third data indicating the first reference to the graphical element ~~in response to a user of the mobile device selecting the graphical element~~; and

in response to receiving the third data, performing the steps of:

reading the first reference from the third data ~~the first reference~~;

using the first reference to the graphical element that is read from the third data to locate the first data that describes the graphical element;

after locating the first data that describes the graphical element, reading the second reference from the first data ~~the second reference~~; and

requesting the page from the first application based on the second reference.

42. (Original) The computer-readable medium of Claim 41, wherein the second data does not include the second reference to the page.

43. (Original) The computer-readable medium of Claim 41, wherein the step of managing further comprises storing the first data in a data structure.

44. (Original) The computer-readable medium of Claim 43, wherein the second reference is a value of a next page attribute of the data structure.

45. (Original) The computer-readable medium of Claim 43, wherein the data structure inherits methods and attributes from a bean class for exhibiting persistence and serialization.

46. (Original) The computer-readable medium of Claim 45, wherein the bean class is a JavaBeans class.

47. (Original) The computer-readable medium of Claim 41, the instructions further causing the one or more processors to perform the step of receiving fourth data from a second application, the fourth data describing the graphical element and including the second reference to the page associated with requesting the service from the first application.

48. (Original) The computer-readable medium of Claim 47, wherein the second application is different than the first application.

49. (Original) The computer-readable medium of Claim 47, wherein the second application is the same as the first application.

50. (Original) The computer-readable medium of Claim 47, said step of managing the information further comprising generating the first reference based on the fourth data.

51. (Original) The computer-readable medium of Claim 41, the instructions further causing the one or more processors to perform the step of receiving fourth data from the first application in response to said step of requesting the page, the fourth data describing the page and comprising fifth data describing a different graphical element for display on the mobile device, the fifth data including a third reference to a different page associated with requesting a service from a second application.

52. (Currently Amended) The computer-readable medium of Claim 51, wherein the information managed by the ~~mobile applications~~ server includes the fifth data.

53. (Original) The computer-readable medium of Claim 41, wherein the information managed includes fourth data about a plurality of pages associated with a plurality of applications and the step of managing the information further comprises generating a unique name for the page among the plurality of pages based on the second reference.

54. (Currently Amended) The computer-readable medium of Claim 41, said step of requesting the page further comprising providing fourth data to the application based the information managed by the ~~mobile applications~~ server.

55. (Original) The computer-readable medium of Claim 54, wherein the fourth data includes the second reference.

56. (Original) The computer-readable medium of Claim 54, wherein the third data does not include the fourth data.

57. (Original) The computer-readable medium of Claim 54, wherein the second data does not include the fourth data.

58. (Original) The computer-readable medium of Claim 54, wherein the fourth data comprises a universal resource locator (URL) address for the page for use with an Internet protocol (IP) on the network.

59. (Original) The computer-readable medium of Claim 58, wherein the fourth data further comprises input parameters and corresponding values for use by the application at the URL address in providing the service associated with the page.

60. (Original) The computer-readable medium of Claim 41, wherein:
the graphical element is included on a different page associated with requesting a different service from a second application;
the different page has a third reference; and
the instructions further causing the one or more processors to perform the step of requesting the different service from the second application in response to receiving the third data based on the third reference.

61. (Original) The computer-readable medium of Claim 60, wherein the second application is different than the first application.

62. (Original) The computer-readable medium of Claim 60, wherein the second application is the same as the first application.

63. (Currently Amended) The computer-readable medium of Claim 60, wherein:
the information managed by the ~~mobile applications~~ server includes fourth data describing the different page including the third reference to the different page;
the step of requesting the different service from the second application further comprising sending fifth data to the second application based on at least one of the first data and the fourth data.

64. (Original) The computer-readable medium of Claim 60, wherein the step of requesting the different service from the second application comprises invoking a particular method of the second application.

65. (Original) The computer-readable medium of Claim 64, wherein:
the particular method is an event handling method for an exiting page event associated with the different page;
the step of invoking the particular method further comprises generating an exiting page event for the different page; and
the exiting page event includes the third reference.

66. (Original) The computer-readable medium of Claim 65, wherein:
the page is data structure that inherits methods and attributes from a mobile bean class defining an event handling interface for an exiting page event; and
the particular method is an implementation of the event handling interface; and
the page includes the particular method.

67. (Original) The computer-readable medium of Claim 66, wherein the mobile bean class inherits methods and attributes from a JavaBeans class.

68. (Original) The computer-readable medium of Claim 60, wherein the second data does not include the third reference.

69. (Original) The computer-readable medium of Claim 60, wherein the third data does not include the third reference.

70. (Original) The computer-readable medium of Claim 60, said step of requesting the different service further comprising providing fourth data to the application.

71. (Original) The computer-readable medium of Claim 70, wherein the fourth data comprises a universal resource locator (URL) address for the page for use with an Internet protocol (IP) on the network.

72. (Original) The computer-readable medium of Claim 71, wherein the fourth data further comprises input parameters and corresponding values for use by the application at the URL address in providing the service associated with the page.

73. (Original) The computer-readable medium of Claim 71, wherein the second data does not include the URL address.

74. (Original) The computer-readable medium of Claim 71, wherein the third data does not include the URL address.

75. (Currently Amended) A computer-readable medium carrying instructions for interacting with a client process on a mobile device, connected to a network, ~~over a wireless~~

~~link~~ to navigate an application, the computer-readable medium comprising instructions for causing one or more processors to perform the steps of:

managing information at a ~~mobile application~~ server executing on a platform connected to the network, the information including:

first data describing a plurality of pages sent for display on the mobile device, each page associated with requesting a service from an application, wherein each page has one or more graphical elements, wherein each graphical element includes at least one or more of an input text field, a button, a check list, a set of radio buttons, a pull down menu, a popup menu and the combinations thereof for prompting to obtain input from a user of the mobile device; ~~and~~

wherein the first data includes:

a first reference to each graphical element of the one or more graphical elements, and

values for a plurality of attributes of each graphical element, wherein one of the values associated with one of the plurality of attributes is a second reference to one page of the plurality of pages[[,]]; and

second data describing associations between special keys on the mobile device and page changes among the plurality of pages;

receiving third data from the client process indicating a user of the mobile device has pressed a particular key of the special keys; and

in response to receiving the third data, performing the steps of:

determining a particular page change of the page changes associated with the particular key,

requesting the particular page change from the application,

determining a particular page of the plurality of pages based on the first data and the particular page change, wherein the step of determining the particular page further comprises:

using the particular page change of the page changes to locate the first data that describes the plurality of pages,

after locating the first data, reading from the first data the particular second reference to the particular page, and

sending, to the client process for rendering a particular graphical element of the particular page, fourth data based on the first data, the fourth data including a particular first reference to the particular graphical element.

76. (Original) The computer-readable medium of Claim 75, wherein the page changes include a page back change and a page forward change.

77. (Original) The computer-readable medium of Claim 75, wherein the page changes include a return to a menu page.

78. (Previously Presented) The computer-readable medium of Claim 75, said step of requesting the particular page change from the application comprising the step of requesting the particular page from the application.

79. (Previously Presented) The computer-readable medium of Claim 78, said step of requesting the particular page from the application comprising the steps of:

generating fifth data indicating the particular page; and

invoking a first method of the application with the fifth data as an input parameter.

80. (Previously Presented) The computer-readable medium of Claim 79, wherein:

the fifth data describes an event; and

the first method of the application is an event handling method.

81. (New) A method for interacting with a client process on a mobile device, the method comprising performing a machine-executed operation involving instructions, wherein the machine-executed operation is at least one of:

A) sending said instructions over transmission media;

B) receiving said instructions over transmission media;

C) storing said instructions onto a machine-readable storage medium; and

D) executing the instructions;

wherein said instructions are instructions which, when executed by one or more processors, cause the one or more processors to perform the steps of:

maintaining at a server a set of information about a graphical element, wherein:

said set of information includes values for a plurality of attributes of said graphical element, and

said set of information is associated with a unique name;

wherein said graphical element is configured for receiving input from a user of said mobile device;

storing at said server a mapping between a first reference and said unique name;

sending to said client process data to render said graphical element at said mobile device, wherein said data includes said first reference but does not include said unique name;

receiving at said server a request from said client process, wherein:

said request indicates a particular action performed at said mobile device relative to said graphical element, and

said request includes said first reference; and

in response to receiving said request at said server, performing the steps of:

reading said first reference from said request;

determining said unique name based on said mapping and said first reference that is read from said request;

using said unique name to locate said set of information; and

responding to said particular action based on said set of information.

82. (New) The method of Claim 81, wherein:

said particular action performed at said mobile device relative to said graphical element indicates a particular request for a particular page from an application that is communicatively connected to said server;

said set of information includes a value for a particular attribute of said plurality of attributes of said graphical element, wherein said value references said particular page; and

said step of responding to said particular action includes retrieving said particular page based on said value of said particular attribute.

83. (New) The method of Claim 81, wherein said set of information is stored in a data structure that inherits methods and attributes from a bean class for exhibiting persistence and serialization.

84. (New) The method of Claim 83, wherein said bean class is a JavaBeans class.